Some geophysical formulae:

$$F = \frac{G m_1 m_2}{r^2}$$

$$t^2 = t_0^2 + \frac{x^2}{V^2}$$

$$V_P = \left[\frac{K + \frac{4}{3}\mu}{\rho}\right]^{1/2}$$

$$\frac{1}{V} \approx \frac{\phi}{V_f} + \frac{1-\phi}{V_m}$$

$$V_a = \frac{V}{\sin i}$$

$$DR = 20\log_{10}\left[\frac{A_{max}}{A_{min}}\right]$$

$$w_F = (2\lambda z)^{1/2}$$

$$V = \lambda f$$

$$\rho = 310 V_P^{0.25}$$

$$t \approx t_0 + \frac{x^2}{2V^2 t_0}$$

$$V_S = \left[\frac{\mu}{\rho}\right]^{1/2}$$

$$V_{rms,\,n} = \left[\sum_{i=1}^{n} V_i^2 t_i \Big/ \sum_{i=1}^{n} t_i\right]^{1/2}$$

$$\alpha_n = \left[\frac{V_{RMS,n}^2 t_n - V_{RMS,n-1}^2 t_{n-1}}{t_n - t_{n-1}}\right]^{1/2}$$

$$t_n = 2(\tau_1 + \tau_2 + \ldots + \tau_n)$$

$$R_2 = \frac{\rho_2 V_2 - \rho_1 V_1}{\rho_2 V_2 + \rho_1 V_1}$$

$$fold = \frac{N}{2n}$$

Some mathematical formulae

$$\sqrt{1+x} \approx 1 + \frac{1}{2}x - \frac{1}{8}x^2 + \frac{1}{16}x^3 - \frac{5}{128}x^4 + \ldots \quad \text{når } x \ll 1$$

$$\frac{1}{1+x} \approx 1 - x + x^2 - x^3 + \ldots \quad \text{når } x \ll 1$$

$$(1+x)^n \approx 1 + nx - \frac{n(1-n)}{2!}x^2 + \frac{n(1-n)(2-n)}{3!}x^3 - \ldots \quad \text{når } x \ll 1$$

$$\sin(a+b) = \sin a \cos b + \cos a \sin b$$

$$\sin a \approx a - \tfrac{1}{6}a^3 + \tfrac{1}{120}a^5 - \ldots$$

$$\cos a \approx 1 - \tfrac{1}{2}a^2 + \tfrac{1}{24}a^4 - \tfrac{1}{720}a^6 + \ldots$$

$$e^a \approx 1 + a + \tfrac{1}{2!}a^2 + \tfrac{1}{3!}a^3 + \ldots$$

$$\int \frac{1}{ax+b}\,dx = \frac{1}{a}\ln C(ax+b)$$